

## CLAIMS

1. An expandable intra-gastric balloon (1) for treating obesity, for implanting in the stomach of a patient in order to reduce the volume of the stomach, said balloon  
5 (1) comprising at least one flexible bag (2, 3) presenting an inside face (2A, 3A) and an opposite, outside face (2B, 3B), said inside and outside faces (2A, 3A and 2B, 3B) forming the surface of the at least one flexible bag (2, 3), the balloon being characterized in  
10 that at least a portion of said surface (2A, 3A, 2B, 3B) is covered by a coating (6, 6', 7, 7') comprising parylene.
2. A balloon according to claim 1, characterized in that  
15 said at least one flexible bag (2, 3) is made from silicone.
3. A balloon according to claim 1 or claim 2, characterized in that the coating (6, 6', 7, 7') is  
20 constituted by parylene C.
4. A balloon according to any one of claims 1 to 3, characterized in that the surface (2A, 3A, 2B, 3B) of the at least one flexible bag (2, 3) is covered entirely by  
25 the coating (6, 6', 7, 7'), with the exception of zones (8, 9, 10) acting as interfaces with devices (4, 11) fitted to the bag (2, 3).
5. A balloon according to any one of claims 1 to 4,  
30 characterized in that the thickness (E) of the coating (6, 6', 7, 7') lies in the range 0.2  $\mu\text{m}$  to 100  $\mu\text{m}$ , and preferably in the range 1  $\mu\text{m}$  to 50  $\mu\text{m}$ .
6. A balloon according to any one of claims 1 to 5,  
35 characterized in that at least one flexible bag (2, 3) is for connection to a corresponding fluid source in order

to expand said at least one bag (2, 3) in the stomach by being filled with fluid.

5 7. A balloon according to any one of claims 1 to 6, characterized in that it comprises first and second flexible bags (2, 3), said second bag (3) being disposed inside the first bag (2).

10 8. A balloon according to claim 7, characterized in that said second flexible bag (3) is designed to be connected to a second fluid source in order to expand said second bag (3) in the stomach by being filled with fluid.

15 9. A balloon according to claim 7 or claim 8, characterized in that the surface (2A, 3A, 2B, 3B) of each of said first and second bags (2, 3) is covered, at least in part, by the coating (6, 6', 7, 7') comprising parylene.

20 10. A method of fabricating an expandable intra-gastric balloon (1) for treating obesity, said balloon (1) being designed to be implanted in the stomach of a patient in order to reduce the volume of the stomach, in which method at least one flexible bag (2, 3) is provided or  
25 made that presents an inside face (2A, 3A) and an opposite, outside face (2B, 3B), said inside and outside faces (2A, 3A and 2B, 3B) forming the surface of the at least one flexible bag (2, 3), the method being characterized in that it comprises a deposition step in  
30 which at least a portion of said surface (2A, 3A, 2B, 3B) is covered in a coating (6, 6', 7, 7') comprising parylene.

35 11. A method according to claim 10, characterized in that the coating (6, 6', 7, 7') is deposited on at least one bag (2, 3) by rarefied gas deposition.

12. A method according to claim 10 or claim 11, characterized in that said at least one flexible bag (2, 3) is fabricated from an elastomer material.

5 13. A method according to claim 10, characterized in that the balloon is subjected to a sterilization stage comprising a step of subjecting it to gamma radiation.

10 14. The use of parylene as a coating for an intra-gastric balloon.

15 15. A method of sterilizing an intra-gastric balloon, characterized in that prior to subjecting the balloon to gamma radiation, the balloon is covered in a protective coating based on polymer.

16. A method according to claim 15, characterized in that the protective polymer is based on parylene.